AMENDMENTS TO THE CLAIMS

The following listing of the claims replaces all prior versions and listings of the claims in relation to the present application.

Listing of the Claims

1-45 (canceled).

46. (previously presented) A method for controlling performance of a computer system, comprising:

obtaining a plurality of operating parameters including operating temperature and operating load of an integrated circuit;

analyzing the plurality of operating parameters to provide a target voltage that substantially minimizes power consumption and that simultaneously maintains a substantially constant operating frequency; and

adjusting a power supply coupled to the integrated circuit from an existing voltage to the target voltage.

47. (previously presented) The method of claim 46, wherein obtaining the plurality of operating parameters comprises sensing at least one of operating temperature, operating load, operating voltage, operating frequency, and resistance of the integrated circuit.

48. (previously presented) The method of claim 46, wherein obtaining the plurality of operating parameters comprises detecting a power load variation of the integrated circuit.

49. (previously presented) The method of claim 46, wherein obtaining the plurality of operating parameters comprises detecting an operating temperature variation of the integrated circuit.

50. (previously presented) The method of claim 46, wherein obtaining the plurality of operating parameters comprises sensing at least one operating parameter of a processor.

51. (previously presented) The method of claim 46, wherein analyzing the plurality of operating parameters comprises accessing a look-up table having target voltages corresponding to at least one of the plurality of operating parameters.

52. (previously presented) The method of claim 46, wherein analyzing the plurality of operating parameters comprises solving an equation characteristic of the integrated circuit to obtain the target voltage based on at least one of the plurality of operating parameters.

53. (previously presented) The method of claim 52, wherein analyzing the plurality of operating parameters comprises calculating the target voltage from the equation having an inverse relationship between operating temperature and operating frequency and having a direct relationship between operating voltage and operating frequency.

54. (previously presented) The method of claim 46, wherein adjusting the power supply comprises providing a control signal configured to adjust the power supply to the target voltage.

55. (previously presented) The method of claim 46, comprising programming a programmable power supply.

56. (previously presented) A method for controlling operational parameters of a computer system, comprising:

sensing an operating temperature of an integrated circuit coupled to a power supply;

detecting another operating parameter of the integrated circuit; and

analyzing an operational relationship between the operating temperature, the operating parameter, an operating voltage, and an operating frequency to provide a target voltage that substantially reduces power consumption without substantially altering operating frequency of the integrated circuit.

57. (previously presented) The method of claim 56, wherein detecting the operating parameter comprises obtaining an indicator of existing operating load.

58. (previously presented) The method of claim 56, wherein detecting the operating parameter comprises obtaining an indicator of existing operating voltage.

59. (previously presented) The method of claim 56, wherein detecting the operating parameter comprises obtaining an indicator of existing operating frequency.

60. (previously presented) The method of claim 56, wherein analyzing the operational relationship comprises querying a table having characteristic operating data relating to target voltages of the integrated circuit.

61. (previously presented) The method of claim 56, wherein analyzing the operational relationship comprises solving an equation having an inverse relationship between operating temperature and operating frequency and having a direct relationship between operating voltage and operating frequency.

62. (previously presented) The method of claim 56, comprising providing feedback to the power supply to adjust output of the power supply to provide the target voltage to the integrated circuit.

63. (previously presented) A method for controlling operational parameters of a computer system, comprising:

sensing at least one parameter including a non-temperature operating parameter of an integrated circuit coupled to a power supply; and

analyzing an operational relationship between the at least one parameter, voltage, and frequency to determine a target voltage that substantially minimizes power consumption and that simultaneously holds a substantially uniform operating frequency of the integrated circuit.

64. (previously presented) The method of claim 63, wherein sensing the at least one parameter comprises obtaining an indicator of at least one of existing operating temperature, existing operating load, existing operating voltage, and existing operating frequency.

65. (previously presented) The method of claim 63, wherein analyzing the operational relationship comprises querying a table having characteristic operating data relating to target voltages of the integrated circuit.

66. (previously presented) The method of claim 63, wherein analyzing the operational relationship comprises solving an equation characterizing power consumption, voltage, and frequency of the integrated circuit.

67. (previously presented) The method of claim 63, comprising adjusting the power supply to provide the target voltage to the integrated circuit.

68. (previously presented) A method of providing operational control for an integrated circuit, comprising:

providing a control system configured to analyze an operational relationship between a sensed operating temperature, a sensed operating parameter, an operating voltage, and an operating frequency to provide a target voltage that substantially minimizes power consumption and that simultaneously maintains a substantially constant operating frequency of the integrated circuit.

69. (previously presented) The method of claim 68, wherein providing the control system comprises providing a power supply controller configured to adjust a power supply coupled to the integrated circuit from an existing voltage to the target voltage.

70. (previously presented) The method of claim 68, comprising providing sensors to obtain the sensed operating temperature and the sensed operating parameter.

71. (previously presented) The method of claim 68, comprising providing a logic unit configured to determine the target voltage.

72. (previously presented) The method of claim 68, comprising providing code configured to determine the target voltage.

73. (previously presented) The method of claim 68, comprising providing a table having characteristic data of the integrated circuit, the table being accessible to query the target voltage based on at least one of the sensed operating temperature and the sensed operating parameter.

74. (previously presented) The method of claim 68, comprising providing a programmable power supply responsive to the control system.

75. (previously presented) The method of claim 68, comprising providing the integrated circuit having the control system.

76. (previously presented) The method of claim 74, comprising providing a computer having the integrated circuit.

77. (currently amended) A system, comprising:

an integrated circuit;

a power supply coupled to the integrated circuit;

at least one sensor configured to obtain an indicator of at least one non-temperature operating parameter of the integrated circuit; and

a controller coupled to the at least one sensor and the power supply, wherein the controller is configured to analyze an operational relationship between the at least one non-temperature operating parameter, an operating voltage, and an operating frequency to provide the power supply with a target voltage that substantially minimizes power consumption and that simultaneously maintains a substantially constant operating frequency of the integrated circuit.

78. (previously presented) The system of claim 77, wherein the integrated circuit comprises a processor.

79. (previously presented) The system of claim 77, comprising a computer system.

80. (previously presented) The system of claim 77, wherein the at least one sensor comprises a temperature sensor configured to obtain an indicator of operating temperature of the integrated circuit.

81. (previously presented) The system of claim 77, wherein the at least one non-temperature operating parameter comprises at least one of operating load, operating voltage, and operating frequency.

82. (previously presented) The system of claim 77, wherein the controller comprises a programmable logic unit.

83. (previously presented) The system of claim 77, wherein the controller comprises code stored on a tangible medium.

84. (previously presented) The system of claim 77, wherein the controller comprises a table that can be queried to obtain the target voltage.

85. (previously presented) The system of claim 77, wherein the controller comprises a characteristic equation of the integrated circuit that can be solved to obtain the target voltage.

86. (previously presented) A tangible medium, comprising:

code disposed on the tangible medium, wherein the code is configured to analyze an operational relationship between at least one non-temperature operating parameter, an operating voltage, and an operating frequency to provide a power supply with a target voltage that substantially minimizes power consumption and that simultaneously maintains a substantially constant operating frequency of an integrated circuit.

87. (previously presented) The tangible medium of claim 86, wherein the code is configured to evaluate a plurality of sensed operating parameters for the integrated circuit, including the non-temperature operating parameter and an operating temperature of the integrated circuit.

88. (previously presented) The tangible medium of claim 86, wherein the code is configured to query a table having characteristic operating data relating to target voltages of the integrated circuit.

89. (previously presented) The tangible medium of claim 86, wherein the code is configured to solve an equation characterizing power consumption, voltage, and frequency of the integrated circuit to obtain the target voltage.

90. (previously presented) The tangible medium of claim 86, wherein the code is disposed on a computer system.